Curriculum Vitae

Thomas Thesen
Assistant Professor of Neurology & Radiology
New York University

Department of Neurology
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Education

Ph.D. Cognitive Neuroscience
University of Oxford, Department of Physiology, Anatomy and Genetics (2006)
Merton College
• Doctoral dissertation: *Multisensory Integration in the Human Brain*
fMRI, MEG & intra-cranial EEG of auditory-visual speech perception
- fully funded by The Wellcome Trust

B. A. Liberal Arts and Sciences in Experimental Psychology
San Diego State University, Department of Psychology (2001)
• Distinction in Psychology
• Honors Thesis: *Investigating cortical processing of olfactory stimuli using event-related brain potentials*
- University Prize for best undergraduate thesis in Psychology

Academic Positions

Assistant Professor (tenure-track)
2007- present
Departments of Neurology & Radiology, School of Medicine, New York University, USA
PI, Cognitive Neurophysiology Research Laboratory, NYU School of Medicine
Director, NYU ECoG Center (www.ecog.med.nyu.edu)
Adjunct Assistant Professor, Department of Psychology & Institute for Engineered Interfaces, New York University
Faculty Member, Sackler Institute of Graduate Biomedical Sciences, Biomedical Imaging Program

Postdoctoral Research Fellow
2006 - 2007
Multimodal Imaging Laboratory, University of California at San Diego, USA &
Department of Neurology, New York University, USA
- fMRI, MEG and intracranial EEG of sensory and cognitive function; clinical neuroimaging of epilepsy; non-invasive mapping of language and memory function

Wellcome Trust Research Associate & Doctoral Student
2001-2005
Multisensory Research Group, Department of Physiology, Anatomy and Genetics & Centre for Functional MRI, University of Oxford, UK
- fMRI, MEG and intra-cranial EEG of multisensory processing

Research Assistant (post-graduate)
2001
Department of Brain & Cognitive Sciences, Center for Visual Sciences, University of Rochester, New York, USA
- fMRI and psychophysics of neural plasticity in normal hearing and congenitally deaf individual

Research Assistant (undergraduate)
1999-2001

Neurocognitive Sensory Laboratory, San Diego State University & Alzheimer's Disease and Research Center, University of California, San Diego, USA
- Olfactory event-related potentials in normal and clinical populations (Alzheimer's and Parkinson's Disease)

Teaching

Research Supervisor
2008 - present
Postdocs: Mederic Descoins, Ph.D., Valerie Nunez, Ph.D., Idon Davidesco, Ph.D., Lila Frecska-Horvath, M.D., Shaimaa Khater, M.D., Xiaojing Wu, Ph.D.
Ph.D. thesis: Brian T. Quinn (2013, Neural Science), Megan McGill (2012, MD/PhD program)
Master's thesis: Jennifer L. Mingrino (2009, Pyschology), Erkut Kucukboyaci (Pyschology, 2011), Xiuyuan Wang (Biomedical Engineering, 2009), Donovan Roediger (2011, Pyschology), Dan Pogash (2011, Pyschology), Yizhou Ma (2013, Pyschology), Ella Bahry (2013, Psychology)
Medical Students: Joanna Koutrous (2011, Honor's Thesis), Yan Il (2012, Honor's Thesis), Yifei Zhang (2013, Honor's Thesis)

Lecturer
2006
Department of Psychology, New York University, USA
- 'Introduction to Psychology', independently designed lectures and exams

Lecturer
2003 - 2006
Department of Psychology, Oxford Brookes University, UK
- responsible for preparing and delivering a full lecture series to 'M.Sc. in Neuropsychology' graduate students on 'Neurodegenerative Diseases', 'Sensory Systems' and 'Neuroimaging Methods' (4 semesters)
- lectured to undergraduate students on 'Research Methods in Psychology' and 'Introduction to Statistics' (1 semester)

Tutor
2003 - 2004
St. Catherine's College, University of Oxford, UK
- taught 'Visual Neurophysiology' and 'Functional Neuroimaging' to Human Sciences students in a tutorial system framework (2 terms)

Awards & Honors

Visiting Professor, Center for Mind/Brain Sciences, University of Trento, Italy

Tursky Award, Society for Psychophysiological Research (SPR)

Parker Award for outstanding research, Faculty of SDSU

Research Award, Psi Chi National Honor Society in Psychology

Faculty Research Incentive Award, NYU School of Medicine, 2009-11

Fellow, ILAE Epilepsy Pathology School, Erlangen, Germany

Fellow, Summer School in Visual Neuroscience, Rauischholzhausen, Germany

Ad-hoc reviewer: Journal of Neuroscience, Psychophysiology, Neuroscience Letters, Cognitive Brain Research, Cerebral Cortex, Epilepsy & Behavior, Human Brain Mapping, NMR in Biomedicine, PlosOne, Epilepsia, NeuroImage, Journal of Neurolinguistics, Neuroimage: Clinical, Epilepsy & Behavior: Case Reports, Biological Psychiatry, Brain & Language

Reviewer, Helmholtz Association, Fellowship Grant Panel

Reviewer, Pennsylvania Department of Health, Neuroimaging Grant Panel 2010-14

Reviewer, National Science Foundation, Information & Intelligent Systems, Grant Panel 2014

Professional Membership

1999-present Member, Society for Cognitive Neuroscience
2000-2002 Member, Association for Chemoreception Sciences

2000-present Member, Sigma Xi
2002-present Member, Society for Neuroscience
2007-present Member, American Epilepsy Society
2002-present Member, International Multisensory Research Forum
2010-present Member, Society for the Neurobiology of Language

Synergistic Activities

1. **Organization of intracranial research operation** at the NYU Comprehensive Epilepsy Center. I founded and am leading NYU ECoG (www.ecog.med.nyu.edu), a research consortium that includes investigators from other departments at NYU (Psychology, Neural Science) and other universities (UCSD, Harvard, Princeton) to record sensory and cognitive data from macro and micro electrodes implanted in the brains of epilepsy patients. The infrastructure includes organizing and maintaining hardware, software, regular user meeting, educational lectures, a comprehensive wiki page, and data analysis support for users.
2. **Translational neuroimaging:** I am using newly developed neuroimaging research tools and apply them to clinical problems to aid the evaluation of patients with epilepsy and tumors. I have developed a method for automatic detection of epileptogenic cortical malformations with MRI and provide clinical reports to physicians and neurosurgeon that help in the clinical diagnosis and treatment of patients.
3. **Functional MRI services** for motor, somatosensory and language mapping for the presurgical evaluation of epilepsy and tumor patients to clinicians.
4. **Development and sharing of data analysis software.** Aided in the development of a comprehensive analysis stream (TimeSurfer) for intracranial EEG data that is available to users in the intracranial research consortium and the larger scientific community.
5. **Science education and young scientist career development.** One-to-one mentoring of high school (3 x winner of Siemens Science Competition semifinal award), undergraduate, post-bac, master's, M.D., PhD students and postdoctoral fellows on neuroimaging and neurophysiology research and their individual academic career development (currently there are 16 students receiving training in my lab)

Collaborators: Eric Halgren (UCSD), Sydney Cash (Harvard), Chad Carlson (MCW), Hakwan Lau (Columbia), Ruben Kuzniecky (NYU), Orrin Devinsky (NYU), Karen Blackmon (NYU), Howard Weiner (NYU), Carrie McDonald (UCSD), Anders Dale (UCSD), David Heeger (NYU), Lila Davachi (NYU), Clay Curtis (NYU), Tracy Butler (NYU), Charles Spence (Oxford), David Melcher (Trento), Daniel Senkowski (Berlin), Uri Hasson (Princeton), Cathy Schevon (Columbia), Carla Brodley (Tufts), Terrence Sejnowski (UCSD), Gyuri Buszaki, (NYU)

Current Research Support

ACTIVE

FACES (PI: Thesen) 04/01/07– 03/31/15
Neuroimaging in brain structure and function Epilepsy
This project involved the use of novel quantitative MRI techniques to study epilepsy.
Direct Cost: $30,000 annually

R01 NIH/NIBIB EB 019805 NIH/NIBIB (PI: Thomas Thesen) 7/1/2014 – 6/30/2015
CRCNS: US-German Data Sharing Proposal: Analysis and Visualization of Neural Oscillations in Electrocorticographic Signals
The central goals of the current proposal are (i) to develop a toolbox for the analysis and visualization of neural oscillations in ECoG data, and (ii) to test this ECoG toolbox by analyzing intracranial and scalp recorded EEG data from an intersensory attention paradigm through collaborative data sharing.
Direct & Indirect: $59,460

R01 NIH NS018741 (PI: Eric Halgren) 05/01/07 –04/30/14
Neural Basis of Endogenous Potentials in Humans
The major goal of this project is to localize the neural generators of cognitive potentials in the human. The grant supports the collection of scalp EEG, MEG and fMRI on normal subjects. It also supports the collection of intracranial EEG, together with EEG, MEG, fMRI, in epileptic subjects with intracranial electrodes.
Role: *PI on subcontract*
Direct & Indirect: $236,642 annually

R01 NIH EB009282 (PI: Terrence Sejnowski) 05/01/13 – 04/30/17
CRCNS: Integrated empirical and multi-scale modeling of human sleep spindles

The goal of these studies is to help provide a scientific basis for treatment of sleep disorders as well as promote understanding of the relationship between microscopic neuronal circuit activity and macroscopic non-invasive EEG and MEG measures.
Role: *PI on subcontract*
Direct Cost: $458,053 annually

R01 NIH MH094480 (PI: Uri Hasson) 08/01/11 – 08/31/16
Topographic mapping of a hierarchy of temporal receptive windows using natural stimuli
This grant will enable experimental fMRI and intracranial EEG research on topographic mapping of temporal receptive windows in humans.
Role: *PI on subcontract*
Direct Cost: $267,972 annually

R03 NIH DC010475 (PI: Bijan Pesaran)
Auditory-articulatory representations for speech production 12/1/09 – 11/30/14
The long-term goal of this research is to give people with severe motor disorders the ability to speak and communicate. The goal is to achieve this by uncovering the neural code for speech production using recordings of electrical activity in the human brain.
Role: *Co-Investigator*
Direct Cost: $96,800 annually

R03 NIH MH097206 (PI: Clayton Curtis) 09/10/12 – 7/31/14
Neural synchronization of human frontoparietal cortex
The goal of the proposed research is to understand the role and neurophysiological basis of brain oscillations during working memory performance in humans. These goals will be accomplished with intracranial EEG recordings in patients implanted with intracranial electrodes for seizure monitoring.
Role: *Co-Investigator*
Direct Cost: $49,091 annually

R01 NIH NS084142 (PI: Cathy Schevon) 09/01/13-06/30/18
Seizure localization in humans: the effect of inhibitory surround on the EEG
The goals of this project are to understand the neuronal dynamics of seizure initiation and spread in humans with refractory epilepsy using microelectrode (Utah array) recording methods
Role: *Co-Investigator*
Direct Cost: $418,173 annually

NYU Clinical and Translational Science Institute (CTSI) - (PI: Anli Liu) 11/15/13 – 11/14/14
Transcranial stimulation during sleep to improve cognition
This pilot study will determine whether transcranial current stimulation applied during early sleep can enhance memory consolidation and learning outcomes in healthy subjects.
Role: *Co-Investigator*
Direct Cost: $40,000

PAST

Finding a Cure for Epilepsy and Seizures – FACES (PI: Thesen) 04/01/07 – 03/31/12
Translational Neuroimaging Research: Application of MEG & fMRI for pre-surgical evaluation
This project aimed to investigate language processing in normal controls and epilepsy patients using fMRI and MEG to better localize language function, and to compare findings to the Wada test. The overall goal was to develop experimental tasks and analysis protocols for clinical use in the presurgical evaluation of epilepsy patients for mapping eloquent cortex.
Costs (2012): $115,000

NYU School of Medicine – Arts and Science Bridge Award (PI: Thesen) 06/1/09 – 05/30/11
Interdepartmental Research Consortium for studying Perception & Cognition with Intracranial EEG
This grant provided seed funding for an interdisciplinary research consortium of investigators from NYU Faculty of Arts & Sciences and School of Medicine departments at NYU to study perception and cognition in patients implanted with intracranial macro- and microelectrodes.
Costs (2010): $57,200

RO1 NIH PA07070 (PI: Carrie McDonald) 03/01/10 – 02/29/12
Imaging of Language in the Preoperative Evaluation of Epilepsy
This grant uses pre-operative fMRI, MEG and DTI to predict language and memory outcome in patients undergoing resective surgery for epilepsy.
Role: *PI on subcontract*

2010 Direct & Indirect: $127,909

Tuberous Sclerosis Alliance – Innovation Grant (PI: Howard Weiner) 11/01/08 – 10/31/11
Micro-electrophysiology of Tuberous Sclerosis
This project investigates intracranial laminar electrophysiology in Tuberous Sclerosis. The grant supports laminar microelectrode recordings during neurosurgery to describe the laminar profile of epileptic tissue in the tuberous and peri-tuberous zone.
Role: Co-Investigator
2010 Direct & Indirect: $50,000

Publications

Reviews and Book Chapters:

1. Calvert, G.A. & **Thesen, T.** (2004). *Multisensory integration: Methodological approaches and emerging principles in the human brain.* Journal of Physiology, 98 (1-3): 191-2005. PMID: 15477032

2. **Thesen, T**., Vibell, J., Calvert G. A. & Osterbauer, R. (2004). *Neuroimaging of multisensory processing in vision, audition, touch and olfaction.* Cognitive Processing, 5 (2): 84-93.

3. Kuzniecky R., **Thesen T.,** Devinsky O. (2009) Is *localization-related epilepsy a progressive disorder*? Nature Reviews Neurology. Jul;5(7):356-7. PMID: 19578339

4. Blackmon K. & Thesen T. (2014). *Structural and Quantitative MRI in Epilepsy*. In: "Handbook of Neuropsychology in Epilepsy". William Barr and Chris Morrison, Eds., Springer, New York.

Original reports:

1. Thesen, T. & Murphy, C. (2001). *Age-related changes in olfactory processing detected with event-related brain potentials using velopharyngeal closure and normal breathing*. International Journal of Psychophysiology, 40 (2): 27-35. PMID: 11165350

2. Thesen, T. & Murphy, C. (2002). A *reliability analysis of event-related brain potentials to olfactory stimuli*. Psychophysiology, 39 (6): 733-738. PMID: 12462501

3. Reale, R.A., Calvert, G.A., **Thesen, T.,** Jenison, R.L., Kawasaki, H., Oya, H., Howard, M.A. & Brugge, J.F. (2005). *Auditory-Visual Processing Represented in the Human Superior Temporal Gyrus.* Neuroscience, Mar 2;145(1):162-84. PMID: 17241747

4. Moettoenen R., Calvert G. A., Jaaskelainen I. P., Matthews P. M., **Thesen T.,** Tuomainen J. & Sams M. (2006). *Perceiving identical sounds as speech or non-speech modulates activity in the left posterior superior temporal sulcus*. *NeuroImage*, 30(2):563-9. PMID: 16275021

5. Keller, C. J., Cash, S. S., Narayanan, S., Wang, C., Kuzniecky, C., Carlson, C., Devinsky, D., **Thesen, T.,** Doyle, D., Sassaroli, A. , Boas, D. A., Ulbert, I., & Halgren, E. (2009) *Intracranial microprobe for evaluating neuro-hemodynamic coupling in unanesthetized human neocortex.* Journal of Neuroscience Methods, May 15;179(2):208-18. PMID: 19428529

6. McDonald, C. R. **Thesen, T.,** Hagler, D., J., Carlson, C.,Devinksy, O., Kuzniecky, R., Barr,. W., Gharapetian, L., Trongnetrpunya, A., Dale, A., Halgren, E. (2009). *Distributed Source Modeling of Language with Magnetoencephalography: Application to Patients with Intractable Epilepsy.* Epilepsia, Oct;50(10):2256-66. PMID: 19552656

7. Cash S. S., Halgren E., Dehghani N., Rossetti A. O., **Thesen T.,** Wang C., Devinsky O., Kuzniecky R., Doyle W., Wittner L., Ulbert I. (2009). *The human K-Complex represents an isolated cortical down-state*.

Science, May 22; 324(5930):1084-7. PMID: 19461004

8. Schachter S.C., Guttag J., Schiff S.J., Schomer D.L., **Thesen, T.;** Summit Contributors. Advances in the application of technology to epilepsy: the CIMIT/NIO Epilepsy Innovation Summit. Epilepsy Behav. 2009 Sep;16(1):3-46. PMID: 19780225.

9. Devinsky, O., Davachi, L., Santchi C., Quinn, B. T., Staresina, B. P. & **Thesen , T.** (2010) *Hyperfamiliarity for Faces.* Neurology, Mar 23;74(12):970-4. PMID: 20308681

10. Blackmon, T., Barr, W. B., Kuzniecky, R, DuBois, J., Carlson, C. E., Quinn, B. T., Blumberg, M., Halgren, E., Hagler, D. J., Mikhly, M., Devinsky, O., McDonald, C. R., Dale, A. M., & **Thesen, T**. (2010) *Phonetically Irregular Word Pronunciation and Cortical Thickness in the Adult Brain*. NeuroImage, Jul 15;51(4):1453-8. PMID: 20302944

11. Keller, C., Truccolo, W., Gale, J., Eskandar, E., **Thesen, T.,** Carlson, C. E., Devinsky, O., Kuzniecky, R., Doyle, W., Madsen, J., Schomer, D., Mehta, A., Brown, E., Halgren, E., & Cash, S. S. (2010) *Distinct Neuronal Firing Types during Interictal Epileptoform Discharges in the Human Cortex.* Brain, Jun;133 (Pt 6):1668-81. PMID: 20511283

12. McDonald, C. R. **Thesen, T.,** Carlson, C., Blumberg, M., Girard, H. M., Trongnetrpunya, A., Sherfey, J. S., Devinksy, O., Kuzniecky, R., Doyle, W. K., Cash, S. S., Leonard, M. K., Hagler, D., J., Dale, A. M. & Halgren, E. (2010). *Multimodal imaging of repetition priming: Multimodal imaging of repetition priming: Using fMRI, MEG, and intracranial EEG to reveal spatiotemporal profiles of word processing*. NeuroImage. 2010 Nov 1;53(2):707-17. PMID: 20620212

13. **Thesen, T.,** Carlson, C. E., Quinn, B. T., Devinsky, O., Halgren, E., DuBois, J., McDonald, C. R., French, J., Leventer, R., Felsovalyi, O., Wang, X., & Kuzniecky, R. (2011) *Detection of Epileptogenic Malformations with Surface-based MRI Morphometry*. PLoS One, Feb 4;6(2):e16430. PMID: 21326599

14. DuBois, J. M., Devinsky, O., Carlson, C., Kuzniecky, R., Quinn, B. T., Alper, K., Butler, T., Starner, K., Halgren, E., **Thesen, T.** (2011) *Abnormalities of Cortical Thickness in Postictal Psychosis*. Epilepsy & Behavior, May 2. PMID: 21543262

15. **Thesen, T.,** Leontiev, O., Song, T., Dehghani, N., Hagler, D. J., Huang, M., Buxton, R., & Halgren E. (2011) *Depression of Cortical Activity in Humans by Mild Hypercapnia.* Human Brain Mapping, April 15. PMID: 21500313

16. Dykstra AR, Halgren E, **Thesen T,** Carlson CE, Doyle W, Madsen JR, Eskandar EN, Cash SS. (2011) *Widespread Brain Areas Engaged during a Classical Auditory Streaming Task Revealed by Intracranial EEG*. Front Hum Neurosci. 2011;5:74. PMID: 21886615

17. Blackmon, K., Barr, W. B., Carlson, C. E., Devinsky, O., DuBois, J., Pogash, D., Quinn, B. T., Kuzniecky, R, Halgren, E., & **Thesen, T.** (2011) *Structural evidence for involvement of a left amygdala-orbitofrontal network in subclinical anxiety*. Psychiatry Research: Neuroimaging, July 29, PMID: 21803551

18. Butler T, Blackmon K, McDonald CR, Carlson C, Barr WB, Devinsky O, Kuzniecky R, Dubois J, French J, Halgren E, **Thesen T.** (2011) *Cortical thickness abnormalities associated with depressive symptoms in temporal lobe epilepsy*. Epilepsy & Behavior, Nov 16. PMID: 22099527

19. Butler, T., Blackmon, K., Zaborsky, L., Wang, X., DuBois, J., Carlson, C., Barr, W. B., French, J., Devinsky, O., Kuzniecky, R., Halgren, E. & **Thesen, T.** (2011) *Volume of the human septal forebrain region is a predictor of source memory accuracy.* Journal of the International Neuropsychological Society, Jan;18(1):157-61. Epub 2011 Dec 9. PubMed PMID: 22152217.

20. Goldberg, E., Roediger, D., Kucukboyaci, E. N., Carlson, C., Devinsky, O, Kuzniecky, R., Halgren, E., & **Thesen, T.** (2011) *Hemispheric Asymmetries of Cortical Volume in the Human Brain.* Cortex, 2011 Nov 19, PMID: 22176871.

21. Blackmon K., Halgren E., Barr W. B., Carlson C., Devinsky O., DuBois J., French J., Kuzniecky R. & **Thesen T.** (2011) *Individual differences in verbal abilities associated with regional blurring of the left gray and white matter boundary*. Journal of Neuroscience, 26 October 2011, 31(43): 15257-15263

22. McGill,M. L., Devinsky, O. Halgren, E., Kelly, C., Milham, M., Castellanos, X. F., Quinn, B. T., DuBois, J., Young, J., Carlson, C., French, J., Kuzniecky, R. & **Thesen, T.** (2012) *Default mode network abnormalities in idiopathic generalized epilepsy.* Epilepsy & Behavior, Mar;23(3):353-9, PMID: 22381387.

23. Yang AI, Wang X, Doyle WK, Halgren E, Carlson C, Belcher TL, Cash SS, Devinsky O, **Thesen T.** *Localization of dense intracranial electrode arrays using magnetic resonance imaging*. Neuroimage. 2012 Oct 15;63(1):157-65 PMID: 22759995.

24. Honey CJ, **Thesen T,** Donner TH, Silbert LJ, Carlson CE, Devinsky O, Doyle WK, Rubin N, Heeger DJ, Hasson U. *Slow cortical dynamics and the accumulation of information over long timescales*. Neuron. 2012 Oct 18;76(2):423-34. PMID: 23083743

25. Thesen T, McDonald CR, Carlson C, Doyle W, Cash S, Sherfey J, Felsovalyi O, Girard H, Barr W, Devinsky O, Kuzniecky R, Halgren E. (2012) *Sequential then interactive processing of letters and words in the left fusiform gyrus*. Nature Communications Dec 18;3:1284. PMID: 23250414.

26. Butler T, Zaborszky L, Wang X, McDonald CR, Blackmon K, Quinn BT, Dubois J, Carlson C, Barr WB, French J, Kuzniecky R, Halgren E, Devinsky O, **Thesen T.** (2013) *Septal nuclei enlargement in human temporal lobe epilepsy without mesial temporal sclerosis*. Neurology. Jan 9. PMID: 23303846.

27. Ahmed, B., **Thesen, T.**, Blackmon, B., Zhang, Y, Devinsky, O., Kuzniecky, R., and Brodley, C. E. (2014) Hierarchical conditional random fields for outlier detection: An application to detecting epileptogenic cortical malformations. International Conference on Machine Learning (ICML 2014). [Full-length archived publication]

28. Butler, T., Zaborzky, L., Pirraglia, E., Li, J., Wang, X.,Li, Y., Wai, T., Talos, D., Devinsky, O., Kuchna, I., Nowicki, K., French, J., Kuzniecky, R., Wegiel, J., Glodzik, L., Rusinek, H., De Leon, M. J., & **Thesen, T.** (2014) *Comparison of human septal nuclei MRI measurements using automated segmentation and a new manual tracing protocol based on histology*. NeuroImage, Apr 12, PMID: 24736183

29. Quinn, B. T., Carlson, C., Doyle, W., Cash, S. S., Devinsky, O., Spence, C., Halgren, E. & **Thesen, T.** (2014) *Intracranial cortical responses during visual-tactile integration in humans*. Journal of Neuroscience. 2014 Jan 1;34(1):171-81. PMID: 24381279

30. Cogan G. B., **Thesen, T.,** Carlson, C., Doyle, W., Devinsky, O. & Pesaran, B. (2014) *Sensory-motor transformations for speech occur bilaterally*. Nature 2014 Mar 6; 507(7490):94-8. PMID: 24429520

31. Blackmon, K., Kuzniecky, R., Barr, W. B., Snuderl, M., Doyle, W., Devinsky & **Thesen, T.** (2014) *Cortical gray-white matter blurring and cognitive morbidity in focal cortical dysplasia*. Cerebral Cortex, Apr 25. PMID:24770710

32. McGill,M. L., Devinsky, O. Wang, X., Quinn, B. T., Carlson, C., Butler, T., Kuzniecky, R. & **Thesen, T.** (2014) Functional neuroimaging abnormalities in idiopathic generalized epilepsy. NeuroImage:Clinical

33. Barron, D. S., Fox, P. T., Pardoe, H., Lancaster, J. L., Price, L., Blackmon, K., Berry, K., Cavazos, J. E., Kuzniecky, R. I., Devinsky, O. & **Thesen, T.** (2014) *Thalamic Functional Connectivity Predicts Seizure Laterality in Individual TLE Patients: application of a biomarker development strategy*. NeuroImage:Clinical

34. Berry, K., Suh, K., Blackmon, K., Devinsky, O., Carlson, C., Kuzniecky, R., Doyle, W. & **Thesen, T.** (in press) *Limitations of fMRI in mapping cortical function near a vascular lesion: A case study*. Journal of Pediatric Neuroradiology

Talks (since at NYU)

Thesen, T. "Novel approaches to studying language and cognition with electro-corticography (ECoG)", *Experts in the Field* Invited Lecture Series; American Neurological Association Annual Conference, Baltimore, M.D., 2014

Thesen, T. "The When & Where of multisensory speech processing", Invited talk at the Society for the Neurobiology of Language Annual Conference, Amsterdam, Netherlands, 2014

Thesen, T. "Multimodal imaging of spatio-temporal dynamics in language processing", Invited symposium talk at the Society for Neuroscience Annual Meeting, Washington, D.C., 2014

Thesen, T. "Malformations of cortical development" Grand Rounds, Department of Paediatrics, Roosevelt Hospital, New York City, 2014

Thesen, T. "Quantitative MRI findings in malformations of cortical development" Department of Neurology, Cornell University School of Medicine, New York City, 2014

Thesen, T. "Detection of structural brain abnormalities in individual neurological patients: Focal Epilepsy" Invited talk at the International Conference on Basic and Clinical Multimodal Imaging, Geneva, Switzerland, 2013

Thesen, T. ""Intracranial Electrophysiology to study perception and cognitions in humans", Center for Mind/Brain Sciences, Invited Lecture, University of Trento, Rovereto, Italy, 2013

Thesen, T. "MRI morphometry of epileptogenic lesions" Department of Neurology, Invited Talk, University of Verona, Italy, 2013

Thesen, T. "Quantitaive Loesungen zur Lokalisierung bei kryptogener fokaler Epilepsie" Epilepsiezentrum, Berlin, Germany, 2013

Thesen, T. "In Search of the Occult: Automated Detection of Epileptogenic Brain Malformations on MRI" Department of Computer Science, Cornell University, New York, USA, 2013

Thesen, T. "Studying large-scale human brain dynamics with fMRI, MEG and intracranial EEG", Department of Psychiatry, Charite University, Berlin, Germany, 2013

Thesen, T. & Blackmon, K. E., "Linking quantitative MRI to histo-pathology", Department of Pathology, University of Erlangen, Germany, 2013

Thesen, T. "In Search of the Occult: Can image analysis find invisible brain lesions?" Grand Rounds, Department of Neurology, New York University, USA 2012

Thesen, T. "Linking quantitative neuroimaging to epileptogenic histo-pathology" Comprehensive Epilepsy Center, Department of Neurology, New York University, USA, 2012

Thesen, T. "Detecting epileptogenic cortical malformations with surface-based MRI morphometry" Department of Neurosurgery, Budapest University Medical Center, Hungary, 2011

Thesen, T. "Studying large-scale human brain dynamics with fMRI, MEG and intracranial EEG" Invited talk, Rockefeller University, New York, USA, 2011

Thesen, T. "The first 250 ms of reading: Evidence for letter and word-specific processing from MEG, fMRI, and intracranial EEG", Invited talk at the International Conference on Biomagnetism (BIOMAG), Dubrovnik, Croatia. July, 2010

Thesen, T. "Detecting epileptogenic cortical malformations with surface-based MRI morphometry". Invited Talk, Department of Epileptology, University of Bonn, Germany, March 2010

Thesen, T. "Brain structure measurements in neurological disease" Lecture, Seminar to Residents, Department of Neurology, NYU. February, 2009

Thesen, T. "Detecting the occult: Cortical malformations in epilepsy" Invited Talk, Center for Brain Imaging, Department of Psychology, NYU. February, 2010

Thesen T. "Studying cognition in health and disease with intracranial EEG and MRI morphometry" Lecture, Department of Psychology, NYU, August, 2010

Thesen, T. "Finding epilepsy: Automated MRI detection of cortical lesions" Invited Talk, Epilepsy Center, Long-Island Jewish Hospital, February, 2009

Thesen, T. "Imaging cognition: A multimodal approach" Lecture, Comprehensive Epilepsy Center Department of Neurology, NYU. September, 2009

Thesen, T. "Measuring brain structure in epilepsy" Lecture, Comprehensive Epilepsy Center Department of Neurology, NYU. February, 2009

Thesen, T. "Multisensory integration in the human brain" Invited Talk, Department of Psychology, Columbia University, September, 2009

Thesen, T. "Measuring brain structure in epilepsy" Invited Talk, Epilepsy Center, Columbia University, October, 2009

Thesen, T. "Invasive and non-invasive neuroimaging in humans" Invited Talk, Child Study Center, NYU. February, 2008

Thesen, T. "The effects of task and attention on visual-tactile processing: Human intracranial data. Platform presentation, International Multisensory Research Forum, 2008

Thesen, T. "See me, hear me, feel me: Multisensory integration in the human brain". Invited Talk, Cognition & Perception Series, Department of Psychology, NYU. October, 2008

Thesen, T. "Invasive and non-invasive neuroimaging in humans" Invited Talk, Berlin Epilepsy Center, Berlin, Germany. August, 2008

Thesen, T. "Intracranial studies of cognitive and sensory processing: Current state and future developments" Lecture, Comprehensive Epilepsy Center Department of Neurology, NYU. September, 2007

Thesen, T. "Non-invasive localization of language areas" Lecture, Department of Neurology, Neuropsychology Seminar, NYULMC. March, 2007

Thesen, T. "Psychoses of epilepsy and MRI morphometry techniques" Lecture, Comprehensive Epilepsy Center Department of Neurology, NYU. November, 2007

Thesen, T. "More than the sum of the parts: Integration across sensory and Neuroimaging modalities" Lecture, Department of Neurology, Neuropsychology Seminar, NYULMC. April, 2007

Thesen, T. "Multimodal Imaging of Perception & Cognition: Integrating MEG, fMRI and intracranial EEG" Platform presentation, Magnetoencephalography in Research and Clinical Application Conference, Barcelona, Spain. July, 2007

Conference abstracts (since at NYU):

Barron DS, Fox PT, Pardoe H, Lancaster JL, Price LR, Blackmon K, Berry K, Cavazos JE, Kuzniecky R, Devinsky O, **Thesen T.** "Thalamic Functional Connectivity Predicts Seizure Laterality in Individual TLE Patients (2014) Organization for Human Brain Mapping: Hamburg, Germany

Curtis, C, Dandekar, S, Devinsky, O, Doyle, W, Carlson, C & **Thesen, T**. Phasic changes in gamma power and the mechanisms of working memory (2014) Cognitive Neuroscience Society conference, Boston, MA.

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